

III. Remarks

Reconsideration of this application in light of the above amendments and the following remarks is requested.

Claims 1-36 were originally filed in the present application. Claims 7-15, 24-27 and 34-36 were previously withdrawn from consideration in response to restriction/election requirements, leaving claims 1-6, 16-23 and 28-33 under consideration. Of these, claims 1, 2, 6-18, 20, 28-31 and 33 are presently amended, and claim 32 is presently cancelled without prejudice or disclaimer. New claim 37 is also presently added. Consequently, claims 1-6, 16-23, 28-31, 33 and 37 are currently pending and under consideration.

IV. Objections: Specification

The Examiner has objected to paragraph [0024] of the specification, asserting that the specification lacks adequate description regarding how the polymer spacer could survive at the elevated temperature that is normally required during the formation of a silicide material, so as to reasonably convey to one skilled in the relevant art that the inventors, at the time the application was filed, had possession of the claimed invention. (Examiner's Office Action, page 2). However, none of the currently-pending claims recite the formation of a silicide material, such that the description sought by Examiner is not relevant to whether the inventors had possession of the claimed invention at the time the application was filed.

That is, Applicants are not aware of any legal or procedural requirement that non-claimed subject matter must be described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventors had possession of the claimed invention at the time the application was filed. In contrast, this requirement stems from 35 U.S.C. § 112, first paragraph, and is only applicable to claimed subject matter, which is clearly not the case here since none of the presently-pending claims positively recite the formation of a silicide material. If Applicants are mistaken as to this requirement of the specification, the Examiner is respectfully requested to indicate where in the MPEP the requirement is explained.

Nonetheless, Applicants also respectfully direct the Examiner's attention to the remainder of paragraph [0024] of the present application, which provides that "... the spacers 210 may be removed after the source/drain regions 220 are formed and before the contact regions 230 are formed" Thus, even if the presently-pending claims were to positively recite the formation of a silicide material, the present specification does indeed include adequate description of at least one embodiment in which the polymer spacers are removed prior to the formation of a silicide material, such that the ability of the

polymer spacers to survive the elevated temperature during silicide formation is a moot consideration. That is, if the spacers are removed prior to silicide formation, then the spacers will not be subjected to the elevated temperature possibly required during the silicide formation, such that there is no reason to include in the specification any description regarding how the spacers can survive silicide formation temperatures.

Accordingly, Applicants respectfully request that the objection to the specification be withdrawn.

V. Objections: Claim 3

The Examiner has objected to claim 3 because the disclosure allegedly lacks an adequate description regarding how the recited diamond substrate is formed, and how the recited patterned feature is formed thereon. However, when determining whether the written description is adequate, it is not sufficient to merely examine the *amount* of direction and guidance in the specification, but such analysis must also examine whether there is a high level of skill in the art at the time the application was filed, as well as whether all of the methods needed to practice the invention were well known at the time the application was filed. See, for example, MPEP §2164. In this context, the level of skill in the art at the time the present application was filed was very high, and the methods needed to form features over a substrate comprising diamond were also well known. For example, U.S. Patent No. 5,272,104 to Schrantz, et al., U.S. Patent No. 5,177,585 to Welbourn, U.S. Patent No. 5,225,366 to Yoder, and U.S. Patent No. 5,252,840 to Shiomi, et al., all demonstrate that substrates containing diamond material have been known in the art for at least ten to fifteen years. Because of the clearly high level of skill in the art and the well known use of semiconductor device substrates comprising diamond, one skilled in the art would need little direction and guidance, if any, regarding making semiconductor devices employing substrates comprising diamond. Accordingly, Applicants respectfully request the Examiner withdraw the objection to claim 3 because, for at least the reasons described above, those skilled in the relevant art will readily find that the present disclosure adequately supports the limitation recited in claim 3.

VI. Rejections under 35 U.S.C. §102

Claims 1, 2, 5, 6, 16, 17, 20-23, 29 and 31 have been rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Pat. App. No. 2004/0157457 to Xu, et al. ("Xu"). Claim 1 recites:

1. A method of manufacturing a microelectronic device, comprising:
forming a patterned feature over a substrate;
depositing a conformal polymer layer over the patterned feature and the substrate by employing a fluorine-containing plasma source and applying a first bias to the substrate in a processing chamber;
etching the polymer layer to expose a portion of the patterned feature and a portion of the substrate by applying a second bias to the substrate in the process chamber, thereby forming polymer spacers on opposing sides of the patterned feature, wherein the second bias is substantially greater than the first bias;
forming doped regions in the substrate, each being laterally offset from the patterned feature by an amount about equal to a width of an adjacent one of the polymer spacers; and
removing the polymer spacers after forming the doped regions.

The PTO provides in MPEP §2131 that to anticipate a claim, a reference must teach every element of the claim. Therefore, to sustain the 102(e) rejection with respect to claim 1, Xu must contain all of the above claimed elements of claim 1. However, among other elements of claim 1, Xu does not disclose the following steps:

- (1) depositing a conformal polymer layer over a patterned feature and a substrate by employing a fluorine-containing plasma source and applying a first bias to the substrate in a processing chamber; and
- (2) subsequently etching the polymer layer to expose portions of the patterned feature and the substrate by applying a second bias to the substrate in the process chamber, thereby forming polymer spacers on opposing sides of the patterned feature, wherein the second bias is substantially greater than the first bias.

Therefore, the §102 rejection of claim 1 is not supported by the Xu reference, and should be withdrawn.

VII. Rejections under 35 U.S.C. §103

Claims 3, 4, 18, 19, 28 and 30 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Xu. Applicants traverse this rejection on the grounds that Xu is defective in establishing a *prima facie* case of obviousness with respect to claim 1.

As the PTO recognizes in MPEP §2142, the Examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness, and if the Examiner does not produce a *prima facie* case, the Applicants are under no obligation to submit evidence of nonobviousness. It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness because Xu does not teach the subject matter of claim 1.

As provided in 35 U.S.C. §103, a patent may not be obtained if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, among other elements of claim 1, Xu fails to teach the following steps:

- (1) depositing a conformal polymer layer over a patterned feature and a substrate by employing a fluorine-containing plasma source and applying a first bias to the substrate in a processing chamber; and
- (2) subsequently etching the polymer layer to expose portions of the patterned feature and the substrate by applying a second bias to the substrate in the process chamber, thereby forming polymer spacers on opposing sides of the patterned feature, wherein the second bias is substantially greater than the first bias.

Consequently, it is impossible for Xu to render obvious the subject matter of claim 1, as a whole, and the explicit terms of §103 cannot be met.

Thus, the Examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met by Xu with respect to claim 1, and the rejection of claim 1 under 35 U.S.C. §103 should be withdrawn.

VIII. Conclusion

It is clear from all of the foregoing that independent claim 1 is in condition for allowance. Dependent claims 2-6, 16-23, 28-31, 33 and 37 depend from and further limit independent claim 1, in a patentable sense, and are therefore allowable as well.

It is believed that all matters set forth in the Office Action have been addressed. Favorable consideration and an early indication of the allowability of the claims are respectfully requested. Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite consideration, the Examiner is respectfully invited to call the undersigned attorney at the telephone number indicated below.

Respectfully submitted,



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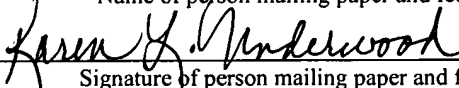
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